

The Examiner has objected to the specification as allegedly failing to provide a proper antecedent basis for the claimed subject matter. In this respect, the Examiner comments that "Only one current source I_{ell} is identified in the specification and in the drawings. If it is assumed for the sake of expediency that I_{ell} is the first current source, then the specification does not provide an antecedent basis for the 'the second current source' recited in claim 1". It is respectfully submitted that the Examiner's interpretation of the specification and drawings is incorrect. The first and second current sources in the overdrive circuit illustrated in Figure 1, for example, are the respective transistor groups PG₁₂ and PG₁₁ which provide the currents I_{PG12} and I_{PG11}. The component I_{ell} in Figure 1 described as "a current source" is neither the first or the second current source as recited in Claim 1. Since the description in the specification and the illustration in the respective figures of the drawings including the embodiments of Figures 1, 3 and 4 identify respective transistor groups PG₁₂ and PG₁₁ as providing the currents I_{PG12} and I_{PG11}, it is respectfully submitted that the specification in describing the transistor groups PG₁₂ and PG₁₁ provides a proper antecedent basis for the claimed subject matter. Accordingly, the objection to the specification as allegedly failing to provide a proper antecedent basis for the claimed subject matter should be withdrawn.

A similar objection has been raised with respect to the drawings, wherein the Examiner has commented that the "second current source" recited in claim 1 must be shown or the feature canceled from the claim. The embodiments of the invention shown in Figures 1, 3 and 4 of the drawings include the respective transistor groups PG₁₂ and PG₁₁ which are the recited "first current source" and "second current source" respectively. Accordingly, the objection to the drawings as allegedly failing to

A

show every feature of the invention as specified in the claims is improper and should be withdrawn.

Claim 1, now canceled, has been rejected under 35 USC 103 as allegedly being unpatentable over Stoll et al in view of Kopec et al. The cancellation of Claim 1 should not be viewed in a manner prejudicial to applicant, inasmuch as the gist of the invention as defined therein is not taught or suggested by the collective teachings of Stoll et al and Kopec et al. Claim 1 has been replaced by Claim 2 which is believed to define the invention in an integrated overdrive circuit in a clarified manner, while retaining the essence of the substantive content of now-canceled Claim 1. Thus, Claim 2 in defining an integrated overdrive circuit formed on a single semiconductor chip requires "a first current source" and "a second current source" in combination with "a first circuit" and "a second circuit" which are interrelated in such a manner as to clearly patentably distinguish over Stoll et al, whether considered singly or in combination with Kopec et al. Referring to Stoll et al, it will be observed that a capacitor 20 is included in the control circuit disclosed therein, the capacitor 20 being charged so as to provide voltage therefrom to an astable multivibrator defined by NAND gate 21, resistors 22, 23, diode 24 and capacitor 25. There is no suggestion or teaching in Stoll et al of providing "a first current source" and "a second current source" interrelated with "a first circuit" and "a second circuit" in the manner required by Claim 2. The Examiner concedes this point, but contends that Kopec et al in Figure 1 provides two current sources I_1 and I_2 for operating a switching element S1. The Examiner then holds that it would be obvious to add the two current source system of Kopec et al to the switch control system of Stoll et al in rejecting now-canceled Claim 1. It is respectfully submitted that this proposed combination of references is not appropriate for teaching or suggesting the

integrated overdrive circuit as defined in Claim 2. The two current sources disclosed in Kopec et al are reference current sources I_1 and I_2 which are alternatively actuated by closure of the respective switch SA or SB associated therewith to provide either current I_1 or I_2 to one input of a comparator 22. The other input of the comparator 22 is taken from an amplifier 18 which senses the current through a coil 12 of a solenoid 10. Thus, the purpose of Kopec et al in utilizing a comparator 22 for controlling the opening and closing of a switch S1 represents a structural and functional arrangement clearly different from what is defined in Claim 2 of the instant application. Moreover, there is no suggestion in either of Stoll et al or Kopec et al for modifying Stoll et al in the manner proposed by the Examiner, any such suggestion coming from applicant's own disclosure and amounting to improper "hindsight". Furthermore, it could not be said that Kopec et al employs "a first circuit" and "a second circuit" in conjunction with the first and second reference current sources shown therein operating in the manner required by Claim 2. Claim 2 should be allowed as being directed to an integrated overdrive circuit clearly differing from the collective teachings of Stoll et al and Kopec et al in a non-obvious manner.

Claims 3-10, inclusive, are dependent from Claim 2 in varying sequences, thereby patentably distinguishing over the collective teachings of Stoll et al and Kopec et al in a manner similar to that argued on behalf of Claim 2. Claim 3, dependent from Claim 2, further structurally restricts the "first current source" as comprising "a first plurality of bipolar transistors having respective base, collector and emitter electrodes and arranged in parallel relationship with respect to each other with the bases, collectors and emitters of the first plurality of bipolar transistors being respectively connected together". The "first circuit" is further structurally restricted in Claim 3 to require

"a bipolar transistor having base, collector and emitter electrodes, the base of said first circuit bipolar transistor being connectable to a voltage supply source and having the collector thereof connected to the commonly connected bases of said first plurality of bipolar transistors of said first current source". Thus, while the "first circuit bipolar transistor" is "conductive over the predetermined time period", the first plurality of bipolar transistors are rendered conductive "so as to provide the first current as the overdrive current for driving the switching element". Nothing even remotely comparable to such structure occurs in either of Stoll et al or Kopec et al. For this further reason, Claim 3 should be allowed.

Claim 4 depends from Claims 3 and 2 in sequence and further structurally restricts the "second current source" as comprising "a second plurality of bipolar transistors having base, collector and emitter electrodes and arranged in parallel relationship with respect to each other with the bases, collectors and emitters of the second plurality of bipolar transistors being respectively connected together", while the "second circuit" is further structurally defined as including "a second circuit bipolar transistor having base, collector and emitter electrodes, the base of said second current bipolar transistor being connectable to the voltage supply source, and the collector of said second circuit bipolar transistor being connected to a node located in the connection between the voltage supply source and the base of said first circuit bipolar transistor". Thus, the "second circuit bipolar transistor" becomes conductive "in response to a rise in voltage at the base thereof" so as to draw "current from the voltage supply source through the collector thereof so as to lower the voltage applied to the base of said first circuit bipolar transistor for turning off said first circuit bipolar transistor to render said first circuit bipolar transistor nonconductive".

This causes the "first plurality of bipolar transistors defining said first current source" to become "nonconductive to stop said first current source from providing the overdrive current in response to said first circuit bipolar transistor being rendered nonconductive". As this occurs, the "second circuit bipolar transistor" becomes conductive so as to render "said second plurality of bipolar transistors defining said second current source conductive so as to operate said second current source to provide the second current as the ordinary current for driving the switching element". All of the structure added by Claim 4 is not found in either of Stoll et al or Kopec et al. For this further reason, Claim 4 should be allowed.

Similarly, the added structural limitations recited in dependent Claims 5-10, inclusive, contribute to the enhanced patentability of each of these respective claims over the collective teachings of Stoll et al and Kopec et al such that Claims 5-10, inclusive, should be allowed, moreover, on the basis of the added structural limitations therein.

Favorable reconsideration of this application taking the form of a Notice of Allowance is urged to be order, and is respectfully solicited.

Respectfully submitted,

William E. Hiller
William E. Hiller

Attorney for Applicant

Reg. No. 18,803

(214) 995-1360

December 13, 1995

Dallas, Texas

WEH:jlmm

TIJ-18438 -10-

CERTIFICATE OF MAILING 37 CFR 1.8(a)	
I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER OF PATENTS AND TRADE MARKS, WASHINGTON D. C. 20231 ON THE DATE BELOW.	
Dec. 13, 1995 DATE	<i>William E. Hiller</i> WILLIAM E. HILLER, ATTORNEY REG. # 18,803